



## ***A Contractor's Guide to the Standard Data Exchange Format***

Now that you've got that Corps' job it's time to review the paperwork required. One of the recent changes in Corps' requirements has to do with the progress schedule. Current Corps' guide specifications call for progress schedules to be submitted on a data disk according to the Standard Data Exchange Format (SDEF). The SDEF is produced directly from many popular commercial scheduling programs so you have to buy any additional software. With the SDEF, the progress schedule can become more than just paperwork - - it can become your ticket to getting paid faster, getting changes resolved more quickly and identification possible holdups on the job before it's too late to recover.

The following guidelines are provided to make sure that the data you submit is correct. You should ask your scheduler, or consultant, to go over these points with the local Corps office prior to submitting the initial progress schedule.

### **Table of Contents**

Starting and Ending the Job	2
Using Calendars	2
Assigning Responsibility Codes	2
Adding Definable Features of Work	3
Physical vs. Fiscal Completion	3
Reported Earnings as Basis for Payment	3
Getting Paid for Equipment/Delivery Activities	3
Submitting Change Estimates	4
Showing Project Phases	4
Showing Project Work Areas	4
Adding Submittal, Approval, and Delivery Activities	5
Using the Workers Per Day Code	5
Submitting the Data Disk	5
Conclusions	6

## Starting and Ending the Job

When showing the start and end dates on the jobs, there are a variety of ways that scheduling systems allow you to use. To get consistent result regardless of scheduling system used, and to make sure that the Corps office gets the same result that you do, please follow the guidelines below.



- The description of the first activity should be “NTP Acknowledged”
- Add an early start constraint date to this first activity
- The description of the last activity should be “Finish Job”
- Add a late finish constraint to the last activity

## Using Calendars

While many calendars can be supported with most scheduling systems, it is recommended that the following guidelines be followed for most projects:



- The primary schedule should be a 5-day work week (Monday through Friday) schedule
- Federal and other holiday should be assigned to the 5-day schedule
- The second schedule should be a 7-day work week schedule
- No holidays should be used on the 7-day schedule

## Assigning Responsibility Codes

To be able to report on how various subcontractors and general contractor activities are progressing each activity will have a responsibility code. One of Murphy’s Laws of project management is, “The more people responsible for something, the less likely that something is to be accomplished.” Taking this one of Murphy’s many “laws” to heart, each activity may only have a single subcontractor responsibility code. A task containing more than one sub or a sub and general, should be split until only one company is responsible for the task. Use the following guidelines in your schedule:



- Every activities must be assigned one responsibility code
- Each subcontractors will have a unique responsibility code
- Codes for sub contractors, not yet awarded, may be listed by type of work
- All government activities, including GFE/M, will be coded “GOVT”
- Activities not specifically assigned will be assigned to the general contractor.

## Adding Definable Features of Work

Your Quality Control Plan requires that you organize the project according to definable features of work. The definable features of work are assigned to specific activities in the schedule so that preliminary, initial and follow-up inspections may be scheduled.



- All activities must have a definable feature of work code
- You may use the code “Precon” for non-work activities starting the project
- The Features of Work in your Q.C. Plan and schedule must exactly match

## Physical vs. Fiscal Completion

Your payment is based upon earnings on specific schedule activities. During a project some activities may have started but not earned very much. Other activities may have only started but earned the majority of their value. To allow you to get paid as quickly as possible for work in-place, the SDEF allows you to have a separate value for remaining duration and for earnings to date. To insure that you correctly provide both pieces of information during an update be sure that you follow the guidelines below.



- Every activity with earnings must have an actual start date
- In-progress activities must have an actual start date, and a remaining duration
- Every activity that is 100% complete in cost must have a finish date

## Reported Earnings as Basis for Payment

Your payment is based upon earnings on specific schedule activities. Adding up all the activities to get the total contract amount is the first step to making sure your invoice will be accepted. Next, the sum of the value of activities in a each bid item must equal the value of that bid item. Note that a bid item will be created for contract modification that adds to the cost of the overall project. The sum of all activities identified with the unique bid item for the modification must equal the total value of the modification.



- Every activity must have a bid item code
- The sum of the value of all activities must equal the total contract amount
- The sum of the value for all activities must be equal to bid item amounts
- Contract modifications have their own bid item value

## Getting Paid for Equipment/Delivery Activities

The best way to get paid for delivery activities is to add the cost of the equipment to the delivery activity discussed in the previous section. While non-construction activities, typically, should not have cost associated with them, delivery of major equipment or materials is an exception. To be paid for materials on site the following steps should be followed:



- Delivery activities that you want to be paid for must be in the schedule
- You must provide a paid invoice for the equipment or materials

## Submitting Change Estimates

The schedule is the best tool for you to quickly resolve the time impact of changes over two weeks in duration with the Corps' office. In the past you may have only submitted a cost estimate of the extra work to be accomplished. To determine if a time extension should be granted do the following:



- Update the schedule to the point when the change(s) occurred
- Add or edit the effected activities, list the activities on your cover letter
- Add a temporary new bid item code
- Set the bid item for each effected activity to the temporary bid item code
- Recalculate the schedule
- Submit the resulting schedule to the Corps for evaluation

## Showing Project Phases

Many projects are organized in phases. If your project has phasing requirements, then you may need to show these in your schedule. Adding the project phases you will be able to see the status of each of the phases without needing to look through a lot of paper reports. Since it's likely that some phases will be ahead of schedule and some phases could be "cutting it close," you will also want to make sure that the start and finish dates for each of the phases is included in your schedule. Here are some key points when setting up the project phases in your schedule.



- Use a unique Phase of Work code for each phase
- Assign overall activities to phase of work code = "0"
- The first activity of each phase should have an start date constraint
- The last activity in each phase should have a finish date constraint

## Showing Project Work Areas

Many projects are organized in work areas. If your project has repeated work areas, then you may need to show these in your schedule. Adding the project phases you will be able to see the status of each of the phases without needing to look through a lot of paper reports. Also with work areas you may develop resource profiles that show your most productive use of workers, without the need for complicated resource analysis routines built into commercial scheduling software.



- Use a unique work area code for each definable work area
- Assign overall activities to work area code = "0"
- The first activity of each work area may have an early start date constraint
- The last activity of each work area may have a late finish date constraint

## Adding Submittal, Approval, and Delivery Activities

Most submittals are tracked in the submittal register, however, some important submittals should be included directly in your schedule. You can probably already guess which submittals are likely to cause problems. These are the ones that should be included in the schedule as individual activities.



- Procurement activities for possible problem items should be included
- All procurement large equipment should be included
- Use three separate activities: a submittal, approval, and delivery activity
- The Resident Engineer should advise you as to which Category of Work code to use for these activities. For example, you may be able to set the category of work code to “S” for All Submittal Activities, “A” for approvals, and “D” for delivery activities.

## Using the Workers Per Day Code

While not usually required on smaller projects, on larger projects the workers per day code may provide some useful benefits. Using an activity code for the workers per day information, rather than using detailed resource coding allowed by some commercial software systems, provides many of the benefits of a detailed resource analysis without the work often required to perform resource analysis. For example you may be able to identify sequencing that moves too many workers into a given work area. You may also be able to find more efficient ways of scheduling workers by reporting on the “work flow” as individual responsibilities move through various project work areas or phases of work.



- If workers per day is used assign a worker per day amount to every activity
- All activities without any workers per day must have a value of “0”
- The combination of responsibility code and workers per day is the most effective use of this data. Make sure that the level of detail for responsibility codes allows you to track crews through various work areas of the project.

## Submitting the Data Disk

Rather than require you to submit a data disk in a format that may not be compatible with the system that you currently use the Corps requires that scheduling data be provided in a non-proprietary data disk format, the Standard Data Exchange Format (SDEF). Not only does the SDEF allow data transfer between scheduling systems, it also allows you to directly import data into the Corps’ Resident Management System.

## Getting the Right Software

The two problem contractors have when trying to make the SDEF disk is that the schedule software being used is: (1) not the correct version and (2) not correctly set-up. The first step in getting a correct schedule data disk is to get the appropriate version of the software and export program. Next, be sure that the vendor provides the supplementary instruction booklet or updated users. The list below provides points of contact for software that has successfully been tested against the SDEF.

<i><b>Product</b></i>	<i><b>Point of Contact</b></i>	<i><b>Phone Number</b></i>
AlderGraf	Mr. Leon Alderfer	(713) 467-8500
DLWcpm	Mr. David Webber	(972) 690-1954
Open Plan	Mr. Chris Jenson	(713) 558-0514
PMS-80	Mr. Perry Smith	(503) 293-6280
PPMS	Mr. Justin Smith	(214) 929-1877
Primavera (v 2.0)	Any Support Technician	(610) 668-3030

## ***Setting up the Software***

Once you have software that supports the SDEF using the export routines is easy once you get the hang of it. If you would like to make suggestions to vendors, about improvements to their SDEF programs, just pick up the phone and give them a call. SDEF export routines have been written directly into the list of tested software. Each software system vendor also provides instructions for how and where to enter data to insure that the information is correctly included in the SDEF file.

The most frequent problem contractors encounter when producing SDEF data files are incorrectly configured activity coding schemes and the use of more than one bit item per activity. Activity coding schemes must be configured exactly to match the requirements of the SDEF. Most vendors provide sample projects that you may copy and rename. Other vendors require that you edit the activity coding dictionary to create the correct set of codes. The first thing you should do, before adding a single activity to your schedule, is to make sure that the activity codes are correctly configured.

Another problem that has been encountered is that each activity may only contain one bid item. Apparent problems may arise with contracts containing detailed bid item schedules. In these projects, schedulers may need to add additional activities to insure that only one bid item is applied to each activity.

Finally, you will want to check with the Corps office to make sure that both systems use compatible scheduling methods. Currently, the SDEF supports both arrow and precedence scheduling methods, however, the same cannot be said for all of the software that is able to produce SDEF compliant data files.

## **Conclusions**

Transferring schedule data without requiring you to buy and learn new software to suit each project owner will be a great savings to you. Once the data is provided to the Corps, you may be paid more quickly. You will also be able to more easily process justifiable time extensions requests. This will allow quicker equitable adjustments of contract time and help avoid the time issue becoming a matter for the claims process.

